

Title (en)  
GRABBER FOR LOAD HANDLING APPARATUS AND CRANE

Title (de)  
GREIFER FÜR LASTENHANDHABUNGSVORRICHTUNG UND KRAN

Title (fr)  
DISPOSITIF DE SAISIE POUR APPAREIL DE MANIPULATION DE CHARGE ET GRUE

Publication  
**EP 3447533 A1 20190227 (EN)**

Application  
**EP 18198839 A 20140417**

Priority

- FI 20134096 A 20130417
- EP 14784983 A 20140417
- FI U20134096 U 20130417
- FI 2014050285 W 20140417

Abstract (en)  
A grabber (102, 202) for a load handling apparatus comprises an optical distance measuring device (104, 204, 304) and fastening means (106, 206, 306a-c) that fasten the optical distance measuring device (104, 204, 304) in a flexible manner to the grabber. The optical distance measuring device (104, 204, 304, 404, 504) is placed inside a weather shield (702), and the weather shield (702) comprises a first opening (508, 704) in an opening angle (160, 410) of the optical distance measuring device (104, 204, 304, 404, 504), the opening angle being directed through the first opening.

IPC 8 full level  
**G01S 17/06** (2006.01); **B66C 1/10** (2006.01); **B66C 13/08** (2006.01); **B66C 13/46** (2006.01); **G01S 7/481** (2006.01); **G01S 17/42** (2006.01)

CPC (source: EP FI MX RU US)  
**B66C 1/101** (2013.01 - EP US); **B66C 1/42** (2013.01 - US); **B66C 3/14** (2013.01 - RU); **B66C 13/085** (2013.01 - EP US); **B66C 13/16** (2013.01 - US); **B66C 13/18** (2013.01 - FI MX); **B66C 13/46** (2013.01 - EP US); **G01B 11/22** (2013.01 - US); **G01B 11/24** (2013.01 - US); **G01S 7/4813** (2013.01 - EP US); **G01S 17/42** (2013.01 - EP US); **G05B 15/02** (2013.01 - US)

Citation (search report)

- [XAI] EP 0668236 A1 19950823 - SIEMENS AG [DE]
- [A] DE 29510031 U1 19951026 - NOELL GMBH [DE]
- [A] CN 2484295 Y 20020403 - BAOSHAN IRON & STEEL [CN]

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**WO 2014170554 A1 20141023**; AU 2014255584 A1 20151029; AU 2014255584 B2 20161020; BR 112015026287 A2 20170725; BR 112015026287 B1 20210518; CN 105307966 A 20160203; CN 105307966 B 20180102; EP 2986549 A1 20160224; EP 2986549 A4 20161214; EP 2986549 B1 20181010; EP 3447533 A1 20190227; ES 2702902 T3 20190306; FI 10181 U1 20130814; FI 125732 B 20160129; FI 20135609 A 20141018; KR 101804305 B1 20171204; KR 20150143667 A 20151223; MX 2015014648 A 20160301; MY 175202 A 20200615; PH 12015502303 A1 20160222; PH 12015502303 B1 20160222; PL 2986549 T3 20190430; RU 2015146953 A 20170522; RU 2639014 C2 20171219; US 2016107865 A1 20160421; US 9783394 B2 20171010

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